## PATENT COOPERATION TREATY

| From the INTERNATIONAL SEARCHING A                                                                                                                                                                                                                                                                                                                                                                                                                                          | AUTHORITY                                                                                                                                                                      |                                          |                                                  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------|--|--|
| To:<br>JOSEF OSTERWEIL                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                |                                          | PC 17 JAN 2005                                   |  |  |
| S411 AMBERWOOD LANE<br>ROCKVILLE, MD 20853                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                | NIZO.                                    |                                                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                | 0                                        | ITTEN OPINION OF THE<br>ONAL SEARCHING AUTHORITY |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                | (PCT Rule 43bis.1)                       |                                                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                | Date of mailing (day/month/year)         | 13 Jan 2005                                      |  |  |
| Applicant's or agent's file reference                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                | FOR FURTHER ACTION See paragraph 2 below |                                                  |  |  |
| International application No.                                                                                                                                                                                                                                                                                                                                                                                                                                               | International filing date                                                                                                                                                      | (day/month/year)                         | Priority date (day/month/year)                   |  |  |
| PCT/US04/10951                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 19 April 2004 (19.04.20                                                                                                                                                        |                                          | 21 April 2003 (21.04.2003)                       |  |  |
| International Patent Classification (                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                | tion and IPC                             |                                                  |  |  |
| IPC(7): G06K 7/08, 19/06 and US<br>Applicant                                                                                                                                                                                                                                                                                                                                                                                                                                | Cl.: 235/449,492,493                                                                                                                                                           |                                          |                                                  |  |  |
| OSTERWEIL, JOSEF                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |                                          | <del></del>                                      |  |  |
| 1. This opinion contains indication                                                                                                                                                                                                                                                                                                                                                                                                                                         | ns relating to the following item                                                                                                                                              | ns:                                      |                                                  |  |  |
| Box No. I Basis                                                                                                                                                                                                                                                                                                                                                                                                                                                             | of the opinion                                                                                                                                                                 |                                          |                                                  |  |  |
| Box No. II Priorit                                                                                                                                                                                                                                                                                                                                                                                                                                                          | у                                                                                                                                                                              |                                          |                                                  |  |  |
| Box No. III Non-e                                                                                                                                                                                                                                                                                                                                                                                                                                                           | stablishment of opinion with re                                                                                                                                                | gard to novelty, inve                    | ntive step and industrial applicability          |  |  |
| Box No. IV Lack o                                                                                                                                                                                                                                                                                                                                                                                                                                                           | f unity of invention                                                                                                                                                           |                                          |                                                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |                                          |                                                  |  |  |
| Box No. VI Certain                                                                                                                                                                                                                                                                                                                                                                                                                                                          | documents cited                                                                                                                                                                |                                          |                                                  |  |  |
| Box No. VII Certain                                                                                                                                                                                                                                                                                                                                                                                                                                                         | defects in the international ap                                                                                                                                                | plication                                |                                                  |  |  |
| Box No. VIII Certair                                                                                                                                                                                                                                                                                                                                                                                                                                                        | observations on the internation                                                                                                                                                | nal application                          | {                                                |  |  |
| 2. FURTHER ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                |                                          |                                                  |  |  |
| If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered. |                                                                                                                                                                                |                                          |                                                  |  |  |
| If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.                                                                                                   |                                                                                                                                                                                |                                          |                                                  |  |  |
| For further options, see Form PCT/ISA/220.  3. For further details, see notes to Form PCT/ISA/220.                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                |                                          |                                                  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                |                                          |                                                  |  |  |
| Name and mailing address of the ISA/ US  Mail Stop PCT, Atm: ISA/US                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                | Authorized officer                       | Mul 11/1/1-                                      |  |  |
| Commissioner for Patems P.O. Box 1450                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                | Kumiko C. Koyan                          | 12 WMWWW                                         |  |  |
| Alexandria, Virginia 22313-1450<br>Facsimile No. (703) 305-3230                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                | Telephone No. 57                         | 1-272-2394                                       |  |  |

Form PCT/ISA/237 (cover sheet) (January 2004)

# WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US04/10951

|         | INTERNATIONAL SEARCH. C. 12                                                                                                                                                                                                                                                                                                                 |                                  |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Box No  | No. I Basis of this opinion                                                                                                                                                                                                                                                                                                                 |                                  |
| :4      | n regard to the language, this opinion has been established on the basis of the international application in the language as filed, unless otherwise indicated under this item.                                                                                                                                                             |                                  |
|         | This opinion has been established on the basis of a translation from the original language into the following lan which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 2).                                                                                                       |                                  |
| 11/:eh  | h regard to any nucleotide and/or amino acid sequence disclosed in the international application and neces<br>med invention, this opinion has been established on the basis of:                                                                                                                                                             | ssary to the                     |
| a.      | type of material                                                                                                                                                                                                                                                                                                                            |                                  |
|         | a sequence listing                                                                                                                                                                                                                                                                                                                          |                                  |
|         | table(s) related to the sequence listing                                                                                                                                                                                                                                                                                                    |                                  |
| b.      | . format of material                                                                                                                                                                                                                                                                                                                        |                                  |
|         | in written format                                                                                                                                                                                                                                                                                                                           |                                  |
|         | in computer readable form                                                                                                                                                                                                                                                                                                                   |                                  |
| c.      | . time of filing/furnishing                                                                                                                                                                                                                                                                                                                 |                                  |
|         | contained in international application as filed.                                                                                                                                                                                                                                                                                            |                                  |
|         | filed together with the international application in computer readable form.                                                                                                                                                                                                                                                                |                                  |
|         | furnished subsequently to this Authority for the purposes of search.                                                                                                                                                                                                                                                                        |                                  |
| 3. 🗌    | In addition, in the case that more than one version or copy of a sequence listing and/or table relating ther filed or furnished, the required statements that the information in the subsequent or additional copies is identitied the application as filed or does not go beyond the application as filed, as appropriate, were furnished. | reto has been<br>ical to that in |
| 4. Addi | Iditional comments:                                                                                                                                                                                                                                                                                                                         |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
| ſ       |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         | •                                                                                                                                                                                                                                                                                                                                           |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |
|         | •                                                                                                                                                                                                                                                                                                                                           |                                  |
|         |                                                                                                                                                                                                                                                                                                                                             |                                  |

Form PCT/ISA/237(Box No. I) (January 2004)

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US04/10951

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

#### 1. Statement YES Claims Please See Continuation Sheet Novelty (N) NO Claims Please See Continuation Sheet YES Claims Please See Continuation Sheet Inventive step (IS) NO Claims Please See Continuation Sheet YES Claims Please See Continuation Sheet Industrial applicability (IA) NO Claims Please See Continuation Sheet

### 2. Citations and explanations:

Claims 1, 2, 4-9, 12, 13, 16-19, 22-24, 28-32, 42-46, 49-86 lack novelty under PCT Article 33(2) as being anticipated by Gutman et

Gutman discloses a card having conductor 204 corresponding to the magnetic reading head 103 of the magnetic reading mechanism 102 of the magnetic card reader 100. The conductor 204 is electrically coupled to at least one driver circuit 206 for driving electrical signals through the conductor 204. A controller 208 is coupled to the driver circuit 206 for controlling the operation of the driver circuit 206. The controller 208 causes the driver circuit 204 in accordance with the data signal. The electrically drive conductor 204 emits an alternating polarity magnetic field about the conductor 204 with the data signal. The alternating polarity of the magnetic field about the conductor 204 comprises magnetic flux transitions. These magnetic flux transitions can be picked up by the magnetic reading head 103 and detected by the magnetic card reader 100 to indicate bits of information corresponding to the data signal provided by the controller 208. Gutman's system is in accordance with the American National Standards Institute (ANSI) and international standard ISO/IEC. Gutman also further discloses that first, the driver circuit 206 can forward drive a current through the conductor 204 to emit a magnetic field with a first polarity. Second, the driver circuit 206 can drive the conductor 204 with a reverse current to emit a magnetic field of a second polarity.

Claims 3, 14, 15, 27 and 35-41 an inventive step under PCT Article 33(3) as being obvious over Gutman et al in view of Baus Jr. Gutman fails to teach Aiken Biphase code and a debit/credit card.

Baus teaches Aiken biphase code specified by ISO and ANSI standards used in debit/credit cards.

It would have been obvious to an artisan of ordinary skill in the art to combine the teachings of Baus to the teachings of Gutman in order to prevent the alteration and counterfeiting transaction cards.

Claims 10, 11, 20, 21, 25, 26, 33, 34, 47 and 48 an inventive step under PCT Article 33(3) as being obvious over Gutman in view of Shinohara et al.

Gutman fails to teach four track magnetic stripe.

Shinohara teaches a card having four magnetic stripes.

It would have been obvious to an artisan of ordinary skill in the art to integrate the teachings of Shinohara to the teachings of Gutman in order to increase storage space to store more information that can uniquely identify the user or account information.

Form PCT/ISA/237 (Box No. V) (January 2004)

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US04/10951

| Box No. VIII Certain observations on the international applica | Rox No. VIII | Certain observations on th | e international | application |
|----------------------------------------------------------------|--------------|----------------------------|-----------------|-------------|
|----------------------------------------------------------------|--------------|----------------------------|-----------------|-------------|

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claims 3-5, 8-10, 12-15, 20, 21, 25-28, 32-41 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claims 3-5, 8-10, 12-15, 20, 21, 25-28, 32-41 are indefinite for the following reason(s): The above claims are multiple dependent claims.

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US04/10951

|   | L.                                                                                                                                                                                  |                            | ┪ |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---|
| - | Supplemental Box                                                                                                                                                                    |                            | ļ |
|   | In case the space in any of the preceding boxes is not sufficient.                                                                                                                  |                            |   |
|   | Til cano and object in and or one beautiful                                                                                                                                         |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| - | •                                                                                                                                                                                   |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   | 10 tt                                                                                                                                                                               |                            |   |
|   | V.1. Reasoned Statements:  The opinion as to Novelty was positive (Yes) with respect to claims 3,10,11,14,15,20,21,2                                                                | 5-27,33-41,47 and 48       |   |
|   | The opinion as to Novelty was positive (Yes) with respect to claims 1,2,4-9,12,13,16-19,2 The opinion as to Novelty was negative (No) with respect to claims 1,2,4-9,12,13,16-19,2  | 2-24,28-32,42-46 and 49-86 |   |
|   | The opinion as to Novelty was negative (No) with respect to claims NONE.                                                                                                            | •                          |   |
|   | The opinion as to Inventive Step was positive (Yes) with respect to claims NONE  The opinion as to Inventive Step was positive (Yes) with respect to claims 1-86                    |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   | The opinion as to Industrial Applicability was positive (126) with respect to claims NONE  The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   | ·                                                                                                                                                                                   |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   | ·                                                                                                                                                                                   |                            |   |
| ĺ |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| ı |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| ١ |                                                                                                                                                                                     |                            |   |
| l |                                                                                                                                                                                     |                            |   |
|   | •                                                                                                                                                                                   |                            |   |
| l |                                                                                                                                                                                     |                            |   |
| ١ |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
| ١ |                                                                                                                                                                                     |                            |   |
| ١ |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
| ١ |                                                                                                                                                                                     |                            |   |
| - |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
| 1 |                                                                                                                                                                                     |                            |   |
|   |                                                                                                                                                                                     |                            |   |
| ١ | 1                                                                                                                                                                                   |                            |   |

. . .